UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,355	10/29/2001	Shinobu Togasaki	10002673-1	2701

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EXAMINER
ANYA, CHARLES E

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/020,355	TOGASAKI, SHINOBU
	Examiner	**Art Unit**	
	Charles E. Anya	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3/* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2006*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-19 and 23-32* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-19 and 23-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-6,8-19 and 21-32 are pending in this application.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

3.   Claims 1,10,27 and 28 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the written description requirement. The claim(s) contains subject

matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application

was filed, had possession of the claimed invention.

Specifically, the limitation "...determining, at the default one of the front-end

servers, whether the attribute-based category associated with said received transaction

is assigned to the default front-end servers, and if it is not, establishing an association

between i) the attribute-based category of the received transaction and ii) the identified

front-end server..." is not described in figure 7 (Step 720) of the instant application. As

the Examiner read it (specification page 20 lines 5-31), when it is determined that a

transaction is not assigned to a front-server or there is no available front-server, a

default front-server is selected to process a request/transaction, which is different from

the invention as claimed.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-6-8,10-18 and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,128,657 to Okanoya et al. in view U.S. Pat. No. 6,092,178 to Jindal et al. and further in view of U.S. Pat. No. 5,864,679 to Kanai et al.

6.   As to claim 1, Okanoya teaches a method for routing a transaction to a front-end

server (figures 1-5/15-17), comprising: identifying at least one attribute-based category

for said transaction (S52 "...search key..." Col. 11 Ln. 8 - 21), identifying at least one of

a plurality of front-end servers to process said transaction based at least in part on said

identified attribute- based category of said transaction (S54 "...selects some candidate

servers..." Col. 11 Ln. 19 – 21); at least in part on said front-end servers being assigned

to execute transactions corresponding to said attribute-based category (Col. 11 Ln. 59 –

67); when at least one of the front-end server is identified (S54 Col. 19 – 21) and routing

said transaction to one of said at least one identified front- end servers (S57 Col. 11 Ln.

36 – 39).

Okanoya is silent with reference to when no front-end server is identified, (i) routing said transaction to a default one of the front-end servers; (ii) determining whether the transaction is associated with a new attribute-based category, and (iii) assigning the new attribute-based category to the default one of the front-end servers.

Jindal teaches when no front-end server is identified, (i) routing said transaction to a default one of the front-end servers ("...a default server..." Col. 7 Ln. 19 – 36).

It would be obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Jindal and Okanoya because the teaching of Jindal would improve the system of Okanoya by providing a process for optimally selecting preferred server based on load balancing policies (Jindal Col. 3 Ln. 20 – 25).

Kanai teaches determining when said identified attribute-based category is new and assigning said new attribute-based category to at least one of said plurality of front-end servers (Col. 14 Ln. 56 – 67, Col. 15 Ln. 1 - 25).

It would be obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kanai, Jindal and Okanoya because the teaching of Kanai would improve the system of Jindal and Okanoya by providing a transaction routing unit operated by deterministic algorithm which selects optimum transaction processor (Kanai Col. 15 65 – 67).

7.   As to claim 2, Okanoya teaches a method as in claim 1, further comprising assigning said at least one attribute-based category to said transaction (S52 "...search key..." Col. 11 Ln. 8 - 21).

8.   As to 3, Okanoya teaches a method as in claim 2, wherein assigning said at least

one attribute-based category to said transaction comprises associating a tag with said

transaction ("...character string..." Col. 12 Ln. 1 – 5, Ln. 35 – 42).

9.   As to claim 4, Okanoya a method as in claim 1, wherein identifying said at least

one front-end server comprises comparing said attribute-based category for said

transaction to assigned attribute-based categories for said plurality of front-end servers

(Key 75a Col. 11 Ln. 59 – 67, "...comparing..." Col. 16 Ln. 61 – 67).

10.   As to claim 5, Okanoya teaches a method as in claim 1, further comprising

determining whether said at least one front-end server is available for processing said

transaction (S54-S56 Col. 11 Ln. 22 – 39).

11.   As to claim 6, OKanoya teaches a method as in claim 1, further comprising

rerouting said transaction to another of said plurality of front-end servers when said

identified server refuses said transaction (S55 Col. 11 Ln. 26 – 33).

12.   As to claim 8, Okanoya teaches a method as in claim 1, further comprising

notifying a workload manager of said at least one front-end server assigned to said new

attribute-based category ("...back..." Col. 11 Ln. 59 – 67).

13.   As to claims 10 and 11, see the rejection of claims 1 and 2 respectively.

14.   As to claim 12, Okanoya teaches an apparatus as in claim 10, wherein said attribute-based category is based on at least one "real" attribute of said transaction (Col. 11 Ln. 59 – 67).

15.   As to claim 13, OKanoya teaches an apparatus as in claim 10, wherein said attribute-based category is based on at least one "perceived" attribute of said transaction ("...name..." Col. 12 Ln. 1 – 5).

16.   As to claim 14, Kanai teaches an apparatus as in claim 10, further comprising a user table for assigning said at least one attribute-based category to said transaction (Col. 15 Ln. 45 - 62).

17.   As to claim 15, see the rejection of claims 5 and 6 above.

18.   As to claim 16, Okanoya teaches an apparatus as in claim 10, further comprising program code for assigning a number of attribute-based categories to each of said plurality of front-end servers, wherein said program code for routing said transaction to one of said identified front-end servers routes said transaction according to said assigned attribute-based categories (Col. 11 Ln. 59 - 67).

19.   As to claim 17, Kanai teaches an apparatus as in claim 16, wherein said program

code for assigning at least one attribute-based category to each of said plurality of

servers bases the assignment at least in part on an affinity of transaction attributes

(figure 23 Col. 18 Ln. 51 - 67, Col. 19 Ln. 12 - 37).

20.   As to claim 18, Okanoya teaches an apparatus as in claim 16, further comprising

a workload manager table for recording said assigned attribute-based categories (State

Manager 111 Col. 11 Ln. 59 – 67).

21.   As to claim 23, Okanoya teaches a method as in claim 1, wherein identifying said

at least one attribute-based category for said transaction comprises identifying a

"perceived" attribute of said transaction ("...name..." Col. 12 Ln. 1 – 5).

22.   As to claim 24, Okanoya teaches a method as in claim 23, wherein the identified

"perceived" attribute is the computer originating the transaction ("...name..." Col. 12 Ln.

1 – 5).

23.   As to claim 25, Okanoya teaches a method as in claim 23, wherein the identified

"perceived" attribute is the user originating the transaction ("...name..." Col. 12 Ln. 1 –

5).

24.   As to claim 26, Okanoya teaches a method as in claim 23, wherein the identified

"perceived" attribute is a class of users from which the transaction originates

("...name..." Col. 12 Ln. 1 – 5).

25.   As to claim 27, Kanai teaches determining, at an identified front-end server,

whether the attribute-based category associated with said received transaction is

assigned to the identified front-end server (figure 19A Col. 17 Ln. 37 – 50), and if it is

not, establishing an association between i) the attribute-based category of the received

transaction and ii) the identified front-end server (figure 23 Col. 18 Ln. 51 – 67). Also

see the rejection of claim 1 above.

26.   As to claim 28, Kanai teaches a method as in claim 27, further comprising: if the

identified front-end server establishes an association between itself and an attribute-

based category, broadcasting this association to a plurality of workload managers that

can route transactions to the identified front-end server ("...registered..." Col. 25 Ln. 39

– 49).

27.   As to claim 29, Kanai teaches a method as in claim 28, further comprising: upon

a workload manager's receipt of said broadcast association, the workload manager

updating its own table of assignments between attribute-based categories and front-end

servers (Col. 25 Ln. 39 – 46).

28.   **Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,128,657 to Okanoya et al. in view U.S. Pat. No. 6,092,178 to Jindal et al. and further in view U.S. Pat. No. 5,864,679 to Kanai et al. of as applied to claim 1 above, and further in view of U.S. Pat. No. 6,681,244 B1 to Cross et al.**

29.   As to claim 9, Okanoya is silent with reference to a method as in claim 1, further comprising: determining a status of an attribute-based category; and deallocating said attribute-based category from said front-end server to which it is assigned when said status is inactive.

Cross teaches a method as in claim 1, further comprising: determining a status of an attribute-based category; and deallocating said attribute-based category from said front-end server to which it is assigned when said status is inactive (Col. 6 Ln. 15 - 27).

It would be obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Cross, Kanai, Jindal and Okanoya because the teaching of Cross would improve the system of Kanai, Jindal and Okanoya by regulating client routing (Cross Col. 6 Ln. 15 - 27).

30.   As to claim 19, see the rejection of claim 9 above.

31.   **Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,128,657 to Okanoya et al. in view of U.S. Pub. No. 2002/0161917 A1 to Shapiro et al.**

32.   As to claim 30, Okanoya teaches a method for routing a transaction to a front-

server, comprising: identifying at least one attribute-based category for said transaction

(S52 "...search key..." Col. 11 Ln. 8 - 21), attempting identifying at least one of a

plurality of front-end servers to process said transaction based at least in part on said

identified attribute- based category of said transaction (S54 "...selects some candidate

servers..." Col. 11 Ln. 19 – 21); at least in part on said front-end servers being assigned

to execute transactions corresponding to said attribute-based category (Col. 11 Ln. 59 –

67); and routing said transaction to one of said at least one identified front- end servers

(S57 Col. 11 Ln. 36 – 39); one or more of said front-end servers, maintaining its own

table of attribute-based categories for transactions that it has processed; for each

attribute-based category in its table, maintaining an indication of when a transaction

corresponding to the attribute-based category was last processed by the front-end

server (State Manager 111 Col. 11 Ln. 59 – 67).

Okanoya is silent with reference to after a predetermined time of not processing

a transaction corresponding to an attribute-based category in its table, broadcasting an

indication of this event to a plurality of workload managers that can route transactions to

the front-end server.

Shapiro teaches after a predetermined time of not processing a transaction

corresponding to an attribute-based category in its table, broadcasting an indication of

this event to a plurality of workload managers that can route transactions to the front-

end server ("...poor goodness..." page 6 paragraphs 0070/0071).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of Shapiro and Okanoya because the

teaching of Shapiro would improve the system of Okanoya by dynamically routing data

within a network such that a node determines an efficient method of transmitting the

data based on the routing information, and transmitting the data to a neighbor node

based on the determination of the efficient method (Shapiro page 1 paragraph 0009).

33.   As to claim 31, see the rejection of claim 29 above.

34.   As to claim 32, Shapiro teaches an apparatus as in claim 10, further comprising

program code to update, in response to broadcast indications from said front-end

servers, a table of which attribute-based categories are assigned to which front-end

servers, said table being maintained by and for a particular workload manager (page 6

paragraphs 0070/0071).

Response to Arguments

Applicant's arguments filed 6/13/06 have been fully considered but they are not

persuasive.

Applicant argues in substance that (1) the claim amendments does not add new

matter, (2) the Kanai prior art does not teach how to assign a new attribute-based

category to a front-server because the Kanai prior art is only concerned with how to

route a newly arrived transaction, (3) the Kanai prior art does not teach a user table for

assigning at least one attribute-based category to a transaction, (4) the Cross prior art

does not teach the switch as a front-server and the switch does not relate to a

transaction routing, and (4) the Shapiro prior art does not teach attribute-based

transaction routing, assignment or broadcasting.

Examiner respectfully traverses Applicant's arguments:

As to point (1), although this claim limitation ("...when no front-end server is

identified, (i) routing said transaction to a default one of the front-end servers...") is

disclosed, it was not claimed before the amendment of June 9, 2006 and as such adds

new matter to the claims.

As to point (2), as required by the invention as claimed, after determining when a

new attribute-based transaction is new, the new attribute-based transaction is assigned

to one of a plurality of front-server. This claim limitation is covered by the Kanai prior art

because it provides a data arrangement table that stores data relating to a new

transaction such that when a new transaction is received the data is used to select an

associated transaction processor (Col. 14 Ln. 56 – 67, Col. 15 Ln. 1 – 7). For the data to

be used to select an appropriate transaction processor it has to have been assigned to

the transaction processor otherwise, the transaction processor could not have been

selected using the data of the data arrangement table.

As to point (3), the Cross prior art is analogous to the instant invention because

they both describe how to rout transaction/request/message between a client and

server. Specifically, claims 9 and 19 are related to the de-allocation of a

transaction/request/message from its allocated server when it is determined that the

transaction/request/message is inactive. The Cross prior art covers this limitation

removing a machine address/IP address associated with a request packet/client when it

is determined that the machine address/IP address is inactive.

As to point (4), the invention as claimed requires notifying/broadcasting to

workload managers when a transaction has not been processed after a predetermined

time. The Shapiro prior art meets the requirement by providing a dynamic updating

process that periodically monitors data traffic flow around a network to determine

network node degradation and subsequently notifying/broadcasting same to plural

nodes.

Conclusion

35.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Anya whose telephone number is (571) 272-3757. The examiner can normally be reached on M-F (8:30-6:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-Ai can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles E Anya
Examiner
Art Unit 2194

cea.